

A Case Report on Clinical Management of Lumpy Skin Disease in Bull

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Abstract

This paper reports a clinical management of lumpy skin disease in bull. A local breed bull with the complaint of nodular eruptions on different body parts was presented to Addis Ababa University College of Veterinary Medicine, Veterinary Teaching Hospital in November 29, 2017. A thorough physical examination was revealed that the bull was febrile with rectal body temperature of 40.4°C and had flare-up of small to large sized circumscribed nodules on different body parts and the neck area in particular. Besides, there was lameness, swelling of both prescapular and prefemoral lymph nodes. Based on the history, clinical findings and PCR result the case was confirmed as lumpy skin disease. The case was managed vigorously with combination therapy and interestingly the bull was recovered and sold.

Keywords: Lumpy skin disease; Treatment outcome

Introduction

Lumpy skin disease is among the major health problems affecting the livestock industry of most developing countries like Ethiopia [1-3]. It is principally a disease of cattle caused by lumpy skin disease virus for which Neethling strain is the prototype and transmitted mechanically by arthropod vectors [4-6]. Temporally LSD is shown to be aggregated during the warm and humid months of the year [1], which is directly associated with vector abundance. The authors also revealed the role of husbandry practices such as commingling of animals at communal grazing and watering points in the transmission of LSDV. The disease is manifested by distinguishing firm, circumscribed, few (mild forms) to multiple (severe forms) skin nodules, which sometimes involve mucous membranes of respiratory system, urogenital system and other internal organs [7,8]. In severe cases continuous high pyrexia (40-41.5°C), depression and anorexia may ensue [9]. Subsequently, milk production lessen, abortion, temporary or permanent sterility, damage to hide and deaths will occur which further contribute to a momentous economic losses [10,11]. The treatment of LSD is only symptomatic and targeted at preventing secondary bacterial complications using combination of antimicrobial and anti-inflammatory drugs [12,13].

Case Report

A local breed bull was examined at Addis Ababa University College of Veterinary Medicine, Veterinary Teaching Hospital on November 29, 2017, with nodular eruptions on different body parts. According to the complaints, the feed intake and performance of the animal was also reduced. The animals were kept in communal grazing land with other herds and they were not vaccinated for more than a year. Upon physical examinations, the bull was lethargic and febrile with the rectal body temperature of 40.4°C and 64 beats/min and 36 breaths/min heart rate and respiratory rates respectively. There were flare-up of small to large sized circumscribed nodules on different body parts and the neck area in particular (Figure 1). The nodules were also seen on the scrotum and hind legs. Some nodules coalesced and form larger

nodules (Figure 1) and Arrow. Besides, there was lameness, swelling of both pre scapular and pre femoral lymph nodes. The tentative diagnosis was established as lumpy skin disease (LSD) based on the history, clinical findings and eruption of similar cases in other areas.



Figure 1: First day visit at VTH with lumpy skin nodular lesions.

Laboratory Findings

For further confirmation of the case, a nodular biopsy was obtained and PCR technique was done at National veterinary institute laboratory (NVI, Ethiopia). It was confirmed that the bull was suffered from lumpy skin disease caused by lumpy skin disease virus.

Case Management and Treatment Outcome

A combination therapy of Dexamethasone 0.2 mg/kg/day for three consecutive days and 10% Oxytetracycline 10 mg/kg/day for five successive days were managed. I.M. Feed intake has been recommenced regularly (reported by owner) and also rectal body temperature was dropped to 39.7°C and 38.5°C after 24 and 48 hours

post-treatment, respectively (at clinic), however the nodules were present during the courses of therapy. Three months later the bull was recovered and nodules were also disappeared but with scars on the skin (Figure 2). A week after recovery, the owner reported that he sold his bull.



Figure 2: Indicates healed nodular lesion with scar on the skin (picture taken three months later).

Discussion

Based on the clinical signs, history and PCR result, the current incident was confirmed as LSD which is in accordance with review [14], which indicates clinical manifestations of LSD. The infected animals may show fever commonly rises to 40-41.5°C, lacrimation, increased nasal and pharyngeal secretions, anorexia, dysgalactia, general depression and a disinclination to move. The usual manifestations of LSD are multiple firm circumscribed nodules developed in the skin of the animals in which head, neck, the perineum, the genitalia, udder, and the limbs are principally involved. The regional lymph nodes are easily palpable and enlarged 3-5 times their normal size. Most cases may complicate or extend to other underlying tissues or internal organs and may sequel in economically significant disorders [9]. LSD is not associated with high mortalities (1-3%); however, the economic losses accompanying LSD eruption is higher. The losses are significantly due to decreased feed intake, milk production, weight conversion, abortion, infertility, and damaged hides [13,15,16]. Therefore systemic antibiotic and anti-inflammatory drugs are obligatory for skin infections, cellulitis or pneumonia and considerably to avoid further complications and economic losses [13].

In the current incidents, 10% Oxytetracycline and Dexamethasone were directed; consequently fever, anorexia, nodular lesions and other deviations were remarkably improved but the skin healed with scar. Similarly, a treatment trial conducted by doctors [12] with the aim of preventing LSD complications and saving the life has been successful using a combination of antimicrobials, anti-inflammatory, supportive therapy and antiseptic solutions. According to the authors, the complications encountered during the trial have been recovered within 3 days to 2 weeks. However, the treatments do not guarantee full recovery as the skin nodular restoration prolonged and healed with scar.

Conclusion

Lumpy skin disease (LSD) is an economically devastating viral disease of cattle characterized by distinctive nodular lesions principally on the skin, hence reduces hide quality. A treatment aimed at preventing LSD complications and saving the life has been successful using a combination of antimicrobials and anti-inflammatory.

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